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U. S. Department of Agriculture
Washington, D. C.
**HISTORY and CULTURAL
DIRECTIONS FOR**

Catalpa Speciosa

**40 Reasons Why it Pays to
Grow the Catalpa**

**Greenwood
County Nursery**

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40 REASONS WHY IT PAYS

TO PLANT THE CATALPA

1. By 1920 American forests will be exterminated.
2. The only valuable tree which will mature in time.
3. Is antiseptic; requiring no chemical treatment.
4. It grows in almost any soil.
5. Is easily propagated and managed.
6. Demands no professional manipulation.
7. Most durable wood known.
8. Valuable for cross-ties; have endured for half a century.
9. Nothing better for telegraph poles.
10. Miles of living trees used for telegraph lines.
11. Makes magnificent veneers.
12. Superior to oak for furniture.
13. Lighter than pine.
14. Stronger than oak.
15. Tougher than hickory.
16. Freedom from warping.
17. Neither shinks nor swells.
18. Makes best wood pulp and book paper.
19. Immense yield per acre.
20. Excels for building material.
21. Equals walnut for carving.
22. Makes good fence posts.
23. For mine timbers not surpassed.
24. Ideal wood for shingles.
25. Every quality for interior house finishing.
26. Good plow beams and handles.
27. Used during centuries for boat building by Indians.
28. Suitable for all car construction.

29. Once planted becomes a perpetual forest.
30. Qualities of ash for agricultural implements.
31. Blocks are used for wood engraving
32. Strong and durable piling timber.
33. Will produce cross-ties at 20 cents each.
34. Less insect enemies than other trees.
35. Fewer diseases than other trees.
36. Quick growth for wind break.
37. A desirable shade tree.
38. Beautiful flowers for ornament.
39. Roots never clog sewers.
40. Practically all uses for which wood is adapted.

HISTORY OF CATALPA SPECIOSA

During the past 10 or 15 years there has been much said in Government publications, bulletins of the Department of Forestry and also in farm papers and magazines regarding the merits of *Catalpa Speciosa* as a suitable tree to use in establishing timber plantations, for shade trees, for planting along fences as living posts, and for the reforestation of timber that has been burned over, or cut for commercial purposes.

As this particular tree is being discussed so much of late, it may be of interest to some who have not heretofore had the opportunity to learn the real history of the tree, to read the following, which has been gathered from the above mentioned sources.

When the territory now known as Indiana and Illinois was first explored, the Indians were found to be using many canoes made from the trunks of *Catalpa* trees, which grew very large in the Wabash valley in the original forests.

The wood of his particular kind of *Catalpa* was light, strong, very durable in contact with the water and mud and did not crack or check when exposed to the sun and wind, and the

Indians found it well suited to their needs in making canoes.

When this land in the Wabash valley and adjoining valleys, where these trees were found, was taken up by the white people, the *Catalpa* was cut for posts, staves, boards, etc., and was used in many ways in preference to oak and many other good trees which were found growing in this section of the country, as it was easy to work up and would last 30 to 50 years when used for posts or in other exposed situations.

Catalpa was very seldom found in natural growth on the hills, or high ground, but was found in the lowlands adjoining the rivers and smaller streams which overflow their banks.

As the *Catalpa* seed pods are light, they float upon the water, and when the Ohio river was high, they were carried up streams to the creeks that empty into the Wabash, and when the Wabash was highest they were carried down stream which accounts for the presence of this tree in parts of the Ohio valley.

The existence and value of this tree was first made known to the world by Gen. Wm. Henry Harrison in 1801. He was then Governor of the Northwest Territory, and later the 9th President of the United States.

In an address made during the year 1814 to the farmers of Hamilton County, Ohio, General Harrison urged the planting of the *Catalpa* and distributed seed from the Wabash valley.

Many earnest men have encouraged the planting of Wabash valley *Catalpa* since that time, and many good trees have been planted but the tree has had a serious setback in many localities on account of ignorance on the part of many seed men and growers who have used seed from the worthless and obnoxious southern *Catalpa*.

About 30 years ago Dr. John A. Warder, of Cincinnati, discovered and published the fact that there were two distinct varieties of *Catalpa*.

Catalpa speciosa is being successfully grown in every state in the Union, and in parts of Canada and also most of the foreign countries.

CULTURAL DIRECTIONS.

Hardy Catalpa (*Catalpa Speciosa*).

PLANTING.

The planting site should be prepared by plowing and harrowing in the spring, and there is an advantage in growing a field crop on the site for one season before planting. It is usually advisable to plant 1-year-old stock in the spring. In the South, however, where the winters are mild, *Catalpa* may be planted with safety in the fall, after one season's growth in the nursery.

Proper spacing of the trees in the plantation depends to some extent upon the regional and site conditions. East of the Mississippi *Catalpa* may be planted 5 by 8 feet or 8 feet apart each way, but in the plains region it will be well to set the trees 4 by 8 feet or 6 feet apart each way. A spacing of 4 by 4 feet is advisable only when early thinnings can surely be made. In general this very close spacing should not be used because the *Catalpa* requires considerable room for lateral root development, and crowding will tend to lessen the vitality of the trees and to lower the rate of growth.

In raising *Catalpa* the object is to obtain the best growth and most perfect form in the shortest possible time. To accomplish this a relatively wide spacing of the trees, supplemented by a limited amount of artificial pruning, is necessary.

CULTIVATION AND CARE.

Catalpa requires especial care if the best results are to be secured.

It is usually advisable to cultivate plantations during the first three seasons, although in regions of abundant rainfall they may be planted with cowpeas or soy beans or sown to crimson clover after one season's cultivation. The disk harrow is the most suitable implement for the first cultivation, after which a common harrow may be used. The soil should

be stirred often enough to maintain a good dust mulch for conserving moisture. After the first year cultivation should be shallow, so as not to mutilate the roots of the trees, and during the third season it may not be feasible at all, since by that time the ground between the rows will often be filled with a network of roots.

Except in the South, on rich soils, where height growth is especially vigorous, the young trees should be cut back to the ground during the late winter or early spring after one or two seasons of growth in the plantation. A number of sprouts will spring up from the stump during the following spring, all of which should be removed during the early part of the growing season except the most vigorous one. Care should be taken not to tear the bark when removing the sprouts. The surviving stem should make a straight branchless growth of from 6 to 10 feet the first season, and will largely do away with the necessity of pruning. Cutting back offers the simplest means of producing straight trunks and without retarding ultimate height growth, it accomplishes the same object as pruning at less expense.

If pruning is undertaken it should be done late in the winter or in early spring before growth starts. In no case should *Catalpa* trees be pruned to a whip. All trees which become severely injured in any way, as by wind, fire, or animals, should be cut back to the ground without delay.

In case the trees have been planted as closely as 4 feet apart it will be necessary to commence thinning the plantation in about four to six years, and before any of the stems will be marketable except for stakes. If, however, a wider spacing has been used and proper care and attention given the plantation, thinnings will not be needed until eight or ten years after planting, when many of the trees will yield 2 to 4 posts each.

Between the age of 12 and 15 the entire plantation may be cut clean for posts and a new forest allowed to start from the stump sprouts, or it may again be thinned and the

best trees left standing to produce poles. If this latter plan is followed, however, the stump sprouts are likely to be less vigorous than if all the trees were cut.

ECONOMIC USES.

The rapid growth durability in contact with the soil, lightness, elasticity, and high fuel value of Catalpa wood make the tree one of the most valuable for economic planting. Catalpa wood cut from the living tree is probably immune from attack by fungus diseases, and is one of the most durable timbers known. When used for fence posts it often remains sound for thirty to forty years. Even in young trees nearly 75 per cent of the wood is heartwood, so that when used for posts the decay of the sapwood does not materially affect the value of the post. The rich coloring of the wood makes it also well suited for cabinetwork.

CATALPAS FOR FENCE POSTS.

About twelve years ago the Fort Scott & Memphis Railroad Company began an experiment in raising catalpa and black locust trees for the purpose of supplying their demand for fence posts and possibly railroad ties. This experiment was located on a farm at Farlington, Kas., and has been watched by hundreds of interested parties to their profit. While it was found that the locust made the best growth during the first year it was also found that at the end of this period of twelve years the Catalpa had made a much larger growth and furnished a better quality of wood. Locust is susceptible to insect injuries and the attacks of various diseases while Catalpa speciosa, which is the only kind that should be planted, is remarkably free from both. Again, it is found that locust is subject to checking and weather cracks and is a difficult wood to han-

dle when building wire fences although it lasts well in the ground. Catalpa speciosa suffers from none of these disadvantages and will outlast even the locust when put in the ground.

At the end of the twelve year experiment it was found that the Catalpa farm at Farlington, Kas., had produced fence posts to the value of \$390.20 per acre, while the expense incurred was \$124.51 for the entire time. This left a profit of \$265 per acre, or \$22.14 per year of cash income with the plantation remaining in better shape now after having been thinned than it was before. It is doubtful if the corn raiser in the same vicinity has averaged as good a profit for the same length of time. It must be remembered that Catalpa speciosa is the only variety that can be used with profit for such purposes as the other varieties have no value except for shade trees.

It is our aim to propagate nothing but the true Catalpa speciosa and to be certain that we have the true variety we sent samples of the seed to the Agricultural Department at Washington, D. C. for examination and received the following reply:

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE WASHINGTON

April 18, 1910.

Mr. J. W. Hinshaw,
Prop., Greenwood County Nursery,
Eureka, Kansas.

Dear Sir—Your letter of April 14 has been referred to me for attention, together with the specimen of seed you send for examination. The seed is Catalpa speciosa, the Hardy Catalpa.

Very truly yours,
G. B. SUDWORTH,
Dendrologist.

